

What is claimed is:

1. A method for producing a semiconductor device, comprising:

fixing a protective sheet to a jig:

removing a dicing-cut region of the protective sheet fixed to the jig;

bonding a semiconductor wafer to the protective sheet at an opposite side of the jig, the protective sheet being fixed to the jig;

detaching the protective sheet and the semiconductor wafer from the jig whereby the semiconductor wafer is exposed from the dicing-cut region where the protective sheet is removed; and

cutting the semiconductor wafer along the dicing-cut region by dicing.

2. The method of claim 1, further comprising:

forming a pad portion on a surface of the semiconductor wafer to be bonded to the protective sheet;

removing a pad region of the protective sheet together with the dicing-cut region to form an opening portion for exposing the pad portion therefrom when the semiconductor wafer and the protective sheet are bonded together; and

bonding a wire to the pad portion exposed from the opening portion of the protective sheet after cutting the semiconductor wafer along the dicing-cut region by dicing.

3. The method of claim 1, wherein removing the dicing-

cut region of the protective sheet is carried out by cutting the dicing-cut region to form a groove.

4. The method of claim 1, wherein the protective sheet is made of a heat-contraction type plastic film.

5. The method of claim 1, further comprising attaching a back side sheet to the semiconductor wafer at an opposite side of the protective sheet before cutting the semiconductor wafer.

6. The method of claim 1, wherein the protective sheet is fixed to the jig by vacuum absorption.

7. The method of claim 1, wherein detaching the protective sheet and the semiconductor wafer from the jig includes applying a pressure to the protective sheet from a side of the jig.

8. A method for producing a semiconductor device, comprising:

preparing a semiconductor wafer and a protective sheet;  
forming a bump on a main surface of the semiconductor wafer;  
forming an opening portion in the protective sheet;  
bonding the main surface of the semiconductor wafer to the protective sheet so that the bump is exposed from the opening portion; and

cutting the semiconductor wafer by dicing to form a semiconductor device covered with the protective sheet and having

the bump exposed from the opening portion.

9. The method of claim 8, further comprising:  
preparing a substrate having a conductive portion thereon;  
disposing the semiconductor device on the substrate with  
the bump contacting the conductive portion; and  
electrically connecting the bump to the conductive portion.

10. The method of claim 8, further comprising:  
fixing the protective sheet to a jig by vacuum absorption  
before forming the opening portion in the protective sheet; and  
detaching the jig from the protective sheet after bonding  
the semiconductor wafer to the protective sheet.

11. The method of claim 10, wherein detaching the jig from  
the protective sheet includes applying a pressure to the  
protective sheet through a hole defined in the jig.

12. A method for producing a semiconductor device,  
comprising:

fixing a protective sheet to a jig;  
bonding a semiconductor wafer to the protective sheet at  
an opposite side of the jig;  
detaching the protective sheet and the semiconductor wafer  
from the jig by a pressure applied to the protective sheet from  
a side of the jig.

13. The method of claim 12, wherein the pressure is applied to the protective sheet through a hole defined in the jig.

14. A semiconductor device comprising:  
a semiconductor chip provided by cutting a semiconductor wafer by dicing: and

a protective member disposed on the semiconductor chip, the protective member being for protecting the semiconductor chip when the semiconductor wafer is cut by dicing,

wherein a peripheral edge portion of the protective member is provided at an inside of a peripheral edge portion of the semiconductor chip.

15. A semiconductor device comprising:  
a semiconductor chip provided by cutting a semiconductor wafer by dicing:

a bump disposed on a surface of the semiconductor chip;

a protective member disposed on the surface of the semiconductor chip and having an opening portion from which the bump is exposed, the protective member being for protecting the semiconductor chip when the semiconductor wafer is cut by dicing.

16. A wafer detachment apparatus comprising;

a jig for fixedly holding a protective sheet thereon, the protective sheet being for protecting a semiconductor wafer by covering the semiconductor wafer; and

pressurizing means for applying a pressure to the

protective sheet so that the protective sheet is detached from the jig by the pressure together with the semiconductor wafer which is bonded to the protective sheet at an opposite side of the jig.

17. The wafer detachment apparatus of claim 16, wherein the pressurizing means applies the pressure to the protective sheet through a through hole defined in the jig.

18. The wafer detachment apparatus of claim 16, wherein:  
the jig has a plurality of recesses on a surface thereof for fixedly holding the protective sheet, and a plurality of holes respectively communicating with the plurality of recesses; and  
the jig deforms the protective sheet fixed thereon along the plurality of recesses by absorption performed through the plurality of holes.

19. The wafer detachment apparatus of claim 16, further comprising a reinforcement plate for supporting the semiconductor wafer at an opposite side of the protective sheet when the protective sheet and the semiconductor wafer are detached from the jig.

20. The wafer detachment apparatus of claim 19, wherein the reinforcement plate has a support surface for supporting the semiconductor wafer, and a protruding portion protruding toward the jig from an outer/peripheral portion of the support surface.